

RESPONSE

In the above-identified Office Action the Examiner repeated the rejections in the Examiner's Office Action mailed on August 21, 2003. More specifically, the Examiner rejected claims 1 and 6 under 35 USC 102(b) as anticipated by US Patent No.4,950,525 to Bailey ("Bailey"). The Examiner rejected claim 2 under 35 USC 103(a) as being unpatentable over Bailey in view of US Patent No.5,821,316 to Ochi, et al. ("Ochi"). The Examiner rejected claims 3-5 under 35 USC 103(a) as being unpatentable over Bailey in view of US Patent No. 5,714,223 to Araki, et al. ("Araki") or US Patent No. 5,988,822 to Abe, et al. ("Abe"). And the Examiner rejected claims 3-5 under 35 USC 103(a) as being unpatentable over Bailey in view of US Patent No.5,941,655 to Jacobs, et al. ("Jacobs").

Applicant has herein amended claim 1. Applicant respectfully submits that the amendments to the claim do not introduce new matter, because they are supported by language in the specification on, *inter alia*, page 11, line 13 to page 16, line 7; page 17, lines 25-30; and page 18, lines 9-16.

REJECTION OF CLAIMS 1 AND 6 UNDER 35 USC 102(b)

The Examiner rejected claims 1 and 6 under 35 USC 102(b) as anticipated by Bailey. Applicant traverse because Applicant's claim 1 and claim 6, which depends from it, are not anticipated by Bailey because Bailey does not disclose a first coating or clear coating having Applicant's claimed volume solids; Applicant's fast drying first coating; Applicant's claimed ratio of reflective bead diameter to film thickness of Applicant's first and/or clear coatings; or the use of his beads as a reflective bead.

Applicant respectfully submits that Bailey does not disclose a ratio of the diameter of a reflective bead to the wet film thickness of a first coating of between 2.0 and 10.0, or a ratio of the diameter of a reflective bead to the dry film thickness of a clear coating of between 0.5 and 3.0. As noted in Applicant's specification, at these ratios, a substantial portion of the reflective bead remains above the surface of the first coating, and Applicant's reflective bead retains much of its ability to reflect light back to the oncoming vehicle after the clear coating is applied. One of ordinary skill in the art knows that Applicant's reflective beads reflect light due to the fact that the beads cause the

surface of the composite not to be smooth. The bumps at the surface of the composite, caused by the protuding top surface of the beads, causes light hitting the bead to reflect, thus causing the bead to act as a mirror that reflects the light back out of the bead, toward, for example an oncoming vehicle, improving the visibility of the road marking. Bailey, on the other hand, embeds his microspheres in his sheeting. Throughout his disclosure, he refers to the microspheres as being embedded, and in all of his drawings, he depicts the microsphere as being submerged well below the top surface of his transparent elastomeric material. One of ordinary skill in the art knows that, because the surface of Bailey's sheeting is smooth, his microspheres are embedded, and his microspheres are not positioned so as to cause the upper surface of the bead to cause a raised bump the sheeting surface, his microspheres are functioning as lenses, not as reflective beads. Bailey's drawing show, and he himself states, that the light rays pass through his microspheres, and are thereby focused onto the underlying specularly reflective coatings, where the light rays are reflected and returned back toward the original source of the light. Thus, due to the embedding of Bailey's microspheres, his microspheres are acting, not as reflective beads, but rather as lenses. In the absence of his specularly reflective layer, Bailey's sheeting would not reflect any light. As such, Bailey does not disclose Applicant's composite which prevents damage to and loss of the reflective beads, yet allows light to impinge upon the beads and reflect backward from the bead, toward, for example an oncoming vehicle.

Further, Bailey does not disclose a first coating containing, upon application, from 40% to 80% volume solids, or a clear coating containing, upon application, from 10% to 50% volume solids. Bailey discloses, in most embodiments of his invention, that his invention is a sheeting whose polymeric layers contain elastomeric materials. The fact that, among other things, he refers to his invention as a sheeting, states that it is deformable, prepares it by extrusion, and embeds the microspheres under heat and pressure, makes it clear to one of ordinary skill in the art that Bailey's sheeting is a solid article, and thus contains 100% solids. While Bailey does disclose one embodiment in which the spacing layer or cover layer is coated from solution, he does not disclose the percent volume solids of such a solution. Thus, Bailey does not disclose a first coating

containing, upon application, from 40% to 80% volume solids, or a clear coating containing, upon application, from 10% to 50% volume solids.

Still further, Applicant respectfully submits that Bailey does not disclose a fast drying first coating. As noted in the specification, a fast drying coating is one that, when applied at a wet coating thickness of 330 microns, it will display a dry-through time of less than 2 hours at 90 percent relative humidity at 23°C, when applied without inclusion of absorbers. Please note that Applicant's invention is not limited to application at a film thickness of 330 microns, this measurement is provided simply for the purpose of defining a test by which one can determine if a coating is a fast-drying coating, according to Applicant's invention. Bailey does not disclose a fast drying first coating.

For the above-mentioned reasons, Applicant respectfully submits that his claims 1 and 6 are not anticipated by Bailey and urges the Examiner to withdraw this rejection.

REJECTION OF CLAIM 2 UNDER 35 USC 103(a)

The Examiner rejected claim 2 under 35 USC 103(a) as being unpatentable over Bailey in view of Ochi.

The Examiner states that Bailey discloses all the limitations of the claimed invention except for the binder glass transition temperature, a feature which the Examiner states is taught by Ochi. Applicant respectfully submits that, as noted above, Bailey does not disclose, teach or suggest Applicant's structure, nor does he teach or suggest a modification to Bailey's structure, and that the Examiner has not met her burden to point to a clear and particular teaching within Bailey or Ochi to do so. Applicant further submits that Ochi does not remedy Bailey's lack or teaching with regard to volume solids of the first and clear coatings, ratio of reflective bead diameter to first coating or clear coating film thickness, or use of a fast drying first coating. Thus, even assuming arguendo that one of ordinary skill in the art were to combine Bailey with Ochi, they would not arrive at Applicant's invention. Therefore, Applicant respectfully submits that claim 2 is not obvious over Bailey in view of Ochi and urges the Examiner to withdraw this rejection.

REJECTION OF CLAIMS 3-5 UNDER USC 103(a)

The Examiner rejected claims 3-5 under 35 USC 103(a) as being unpatentable over Bailey in view of Araki or Abe.

The Examiner states that Bailey discloses all the limitations of the claimed invention except for the visible light transmission of the clear coating, a feature which, it is proposed, is taught by the clear coatings of the retroreflective sheeting of Araki or Abe. Applicant respectfully submits that, as noted above, Bailey does not disclose, teach, or suggest Applicant's structure, nor does he teach or suggest a modification to Bailey's structure, and that the Examiner has not met her burden to point to a clear and particular teaching within Bailey, Araki, or Abe to do so. Applicant further submits that neither Araki nor Abe remedy Bailey's lack or teaching with regard to volume solids of the first and clear coatings, ratio of reflective bead diameter to first coating or clear coating film thickness, or use of a fast drying first coating. Thus, even assuming arguendo that one of ordinary skill in the art were to combine Bailey with Araki or Abe, they would not arrive at Applicant's invention. Therefore, Applicant respectfully submits that claims 3-5 are not obvious over Bailey in view of Araki or Abe and urges the Examiner to withdraw this rejection.

REJECTION OF CLAIM 7 UNDER 103(a)

The Examiner rejected claim 7 under 35 USC 103(a) as being unpatentable over Bailey in view of Jacobs.

The Examiner argues that Bailey discloses all limitations of the invention except for the composite including an absorber such as talc and Jacobs discloses a retroreflective article comprising a base sheet including talc. Applicant respectfully traverses on the basis that, as mentioned above, Bailey fails to disclose, teach, or suggest all limitations of the invention as claimed. Jacobs does not remedy Bailey's lack or teaching with regard to volume solids of the first and clear coatings, ratio of reflective bead diameter to first coating or clear coating film thickness, or use of a fast drying first coating. Thus, even assuming arguendo that one of ordinary skill in the art were to combine Bailey with Araki or Abe, they would not arrive at Applicant's invention. Further, the Examiner has not

identified the disclosures in Bailey or Jacobs which would motivate one skilled in the art to make the combination. Therefore, Applicant respectfully submits that claim 7 is not obvious over Bailey and in view of Jacobs and urges the Examiner to withdraw this rejection.

Conclusion

Applicant respectfully requests the Examiner to pass Applicant's claims 1-7, as amended, to allowance at this time. Applicant's agent is available in order to expedite the allowance of this case at 215-619-5992 or by FAX at 215-592-2682.

Respectfully Submitted,



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Date: May 25, 2004

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